



## Complete Summary

---

### GUIDELINE TITLE

Congenital penile curvature. In: Guidelines on paediatric urology.

### BIBLIOGRAPHIC SOURCE(S)

Congenital penile curvature. In: Tekgul S, Riedmiller H, Gerharz E, Hoebeke P, Kocvara R, Nijman R, Radmayr C, Stein R. Guidelines on paediatric urology. Arnhem, The Netherlands: European Association of Urology, European Society for Paediatric Urology; 2008 Mar. p. 24-5. [8 references]

### GUIDELINE STATUS

This is the current release of the guideline.

## COMPLETE SUMMARY CONTENT

SCOPE  
METHODOLOGY - including Rating Scheme and Cost Analysis  
RECOMMENDATIONS  
EVIDENCE SUPPORTING THE RECOMMENDATIONS  
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS  
QUALIFYING STATEMENTS  
IMPLEMENTATION OF THE GUIDELINE  
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT  
CATEGORIES  
IDENTIFYING INFORMATION AND AVAILABILITY  
DISCLAIMER

## SCOPE

### DISEASE/CONDITION(S)

Congenital penile curvature

### GUIDELINE CATEGORY

Diagnosis  
Treatment

### CLINICAL SPECIALTY

Pediatrics  
Surgery  
Urology

## **INTENDED USERS**

Physicians

## **GUIDELINE OBJECTIVE(S)**

- To outline a practical and preliminary approach to paediatric urological problems
- To increase the quality of care for children with urological problems

## **TARGET POPULATION**

Children and adolescents with congenital curvature of the penis

## **INTERVENTIONS AND PRACTICES CONSIDERED**

### **Diagnosis**

Artificial erection

### **Treatment**

Surgery

- Chordee release
- Short urethral plate cut
- Plication of corpora cavernosa (orthoplasty)
- Corporoplasty with or without corporotomy

## **MAJOR OUTCOMES CONSIDERED**

Satisfactory sexual intercourse in adults

## **METHODOLOGY**

### **METHODS USED TO COLLECT/SELECT EVIDENCE**

Searches of Electronic Databases

### **DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE**

The guidelines were based on current literature following a systematic review using MEDLINE.

### **NUMBER OF SOURCE DOCUMENTS**

Not stated

## **METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE**

Weighting According to a Rating Scheme (Scheme Given)

### **RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE**

#### **Levels of Evidence**

- 1a** Evidence obtained from meta-analysis of randomized trials
- 1b** Evidence obtained from at least one randomized trial
- 2a** Evidence obtained from at least one well-designed controlled study without randomization
- 2b** Evidence obtained from at least one other type of well-designed quasi-experimental study
- 3** Evidence obtained from well-designed non-experimental studies, such as comparative studies, correlation studies and case reports
- 4** Evidence obtained from expert committee reports or opinions or clinical experience of respected authorities

## **METHODS USED TO ANALYZE THE EVIDENCE**

Systematic Review

### **DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE**

Application of a structured analysis of the literature was not possible due to a lack of well-designed studies. Whenever possible, statements have been classified in terms of level of evidence and grade of recommendation. Due to the limited availability of large randomized controlled trials – influenced also by the fact that a considerable number of treatment options relate to surgical interventions on a large spectrum of different congenital problems – this document is therefore largely a consensus document.

## **METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Expert Consensus

### **DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS**

- The first step in the European Association of Urology (EAU) guidelines procedure is to define the main topic.
- The second step is to establish a working group. The working groups comprise about 4-8 members, from several countries. Most of the working group

members are academic urologists with a special interest in the topic. In general, general practitioners or patient representatives are not part of the working groups. A chairman leads each group. A collaborative working group consisting of members representing the European Society for Paediatric Urology (ESPU) and the EAU has gathered in an effort to produce the current update of the paediatric urology guidelines.

- The third step is to collect and evaluate the underlying evidence from the published literature.
- The fourth step is to structure and present the information. The strength of the recommendation is clearly marked in three grades (A-C), depending on the evidence source upon which the recommendation is based. Every possible effort is made to make the linkage between the level of evidence and grade of recommendation as transparent as possible.

## **RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS**

### **Grades of Recommendation**

- A. Based on clinical studies of good quality and consistency addressing the specific recommendations and including at least one randomized trial
- B. Based on well-conducted clinical studies, but without randomized clinical studies
- C. Made despite the absence of directly applicable clinical studies of good quality

## **COST ANALYSIS**

A formal cost analysis was not performed and published cost analyses were not reviewed.

## **METHOD OF GUIDELINE VALIDATION**

Internal Peer Review

## **DESCRIPTION OF METHOD OF GUIDELINE VALIDATION**

There is no formal external review prior to publication.

The Appraisal of Guidelines for Research and Evaluation (AGREE) instrument was used to analyse and assess a range of specific attributes contributing to the validity of a specific clinical guideline.

The AGREE instrument, to be used by two to four appraisers, was developed by the AGREE collaboration ([www.agreecollaboration.org](http://www.agreecollaboration.org)) using referenced sources for the evaluation of specific guidelines. (See the "Availability of Companion Documents" field for further methodology information).

## **RECOMMENDATIONS**

### **MAJOR RECOMMENDATIONS**

Levels of evidence (**1a-4**) are defined at the end of the "Major Recommendations" field.

## **Background**

Penile curvature may be ventral, dorsal or lateral. Most of ventral curvatures are associated with hypospadias due to chordee or ventral dysplasia of cavernous bodies. Similarly, the dorsal curvature is mostly associated with epispadias. Isolated penile curvature is not frequent with an incidence of 0.6% (**Level of evidence: 2**). The curvature is caused by asymmetry of the cavernous bodies.

Curvature over 30 degrees is considered clinically significant; curvature over 60 degrees may interfere with satisfactory sexual intercourse in adulthood (**Level of evidence: 4**).

## **Diagnosis**

Diagnosis is made during hypospadias or epispadias repair using an artificial erection. The isolated anomaly is usually not recognized until later in childhood because the appearance of the penis is normal. The curvature is only observed during erections.

## **Treatment**

The treatment is surgical. An artificial erection is used to determine the degree of curvature and to check the symmetry after the repair.

In hypospadias, chordee related to the tethering of the ventral skin and to the spongiosal pillars is first released. Only in a few cases the penile curvature is caused by a short urethral plate, which should be cut.

To repair the corporeal angulation in the isolated curvature or curvature associated with hypospadias, different techniques of plication of corpora cavernosa (orthoplasty) are used.

In epispadias, a combination of complete release of the urethral body from the corpora and a different kind of corporoplasty with or without corporotomy is usually necessary to achieve a straight penis.

## **Definitions:**

### **Levels of Evidence**

**1a** Evidence obtained from meta-analysis of randomized trials

**1b** Evidence obtained from at least one randomized trial

**2a** Evidence obtained from at least one well-designed controlled study without randomization

**2b** Evidence obtained from at least one other type of well-designed quasi-experimental study

**3** Evidence obtained from well-designed non-experimental studies, such as comparative studies, correlation studies and case reports

**4** Evidence obtained from expert committee reports or opinions or clinical experience of respected authorities

## **CLINICAL ALGORITHM(S)**

None provided

## **EVIDENCE SUPPORTING THE RECOMMENDATIONS**

### **TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS**

The type of supporting evidence is not specifically stated for each recommendation.

## **BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS**

### **POTENTIAL BENEFITS**

- Appropriate diagnosis and treatment of penile erection
- Satisfaction with sexual intercourse in adulthood

### **POTENTIAL HARMS**

Not stated

## **QUALIFYING STATEMENTS**

### **QUALIFYING STATEMENTS**

The purpose of these texts is not to be proscriptive in the way a clinician should treat a patient but rather to provide access to the best contemporaneous consensus view on the most appropriate management currently available. European Association of Urology (EAU) guidelines are not meant to be legal documents but are produced with the ultimate aim to help urologists with their day-to-day practice.

## **IMPLEMENTATION OF THE GUIDELINE**

### **DESCRIPTION OF IMPLEMENTATION STRATEGY**

The European Association of Urology (EAU) Guidelines long version (containing all 19 guidelines) is reprinted annually in one book. Each text is dated. This means

that if the latest edition of the book is read, one will know that this is the most updated version available. The same text is also made available on a CD (with hyperlinks to PubMed for most references) and posted on the EAU websites Uroweb and Urosource ([www.uroweb.org/professional-resources/guidelines/](http://www.uroweb.org/professional-resources/guidelines/) & <http://www.urosource.com/diseases/>).

Condensed pocket versions, containing mainly flow-charts and summaries, are also printed annually. All these publications are distributed free of charge to all (more than 10,000) members of the Association. Abridged versions of the guidelines are published in European Urology as original papers. Furthermore, many important websites list links to the relevant EAU guidelines sections on the association websites and all, or individual, guidelines have been translated to some 15 languages.

## **INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES**

### **IOM CARE NEED**

Getting Better

### **IOM DOMAIN**

Effectiveness

## **IDENTIFYING INFORMATION AND AVAILABILITY**

### **BIBLIOGRAPHIC SOURCE(S)**

Congenital penile curvature. In: Tekgul S, Riedmiller H, Gerharz E, Hoebeke P, Kocvara R, Nijman R, Radmayr C, Stein R. Guidelines on paediatric urology. Arnhem, The Netherlands: European Association of Urology, European Society for Paediatric Urology; 2008 Mar. p. 24-5. [8 references]

### **ADAPTATION**

Not applicable: The guideline was not adapted from another source.

### **DATE RELEASED**

2008 Mar

### **GUIDELINE DEVELOPER(S)**

European Association of Urology - Medical Specialty Society  
European Society for Paediatric Urology - Medical Specialty Society

### **SOURCE(S) OF FUNDING**

European Association of Urology

## **GUIDELINE COMMITTEE**

Not stated

## **COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE**

*Primary Authors:* S. Tekgül; H. Riedmiller; E. Gerharz; P. Hoebeke; R. Kocvara; R. Nijman; Chr. Radmayr; R. Stein

## **FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST**

All members of the working group submit a conflict of interest form. The information is kept on file in the European Association of Urology (EAU) Central Office database. This guidelines document was developed with the financial support of the EAU. No external sources of funding and support have been involved. The EAU is a non-profit organisation and funding is limited to administrative assistance, travel, and meeting expenses. No honoraria or other reimbursements have been provided.

## **GUIDELINE STATUS**

This is the current release of the guideline.

## **GUIDELINE AVAILABILITY**

Electronic copies: Available in Portable Document Format (PDF) from the [European Association of Urology Web site](#).

Print copies: Available from the European Association of Urology, PO Box 30016, NL-6803, AA ARNHEM, The Netherlands.

## **AVAILABILITY OF COMPANION DOCUMENTS**

The following are available:

- EAU guidelines office template. Arnhem, The Netherlands: European Association of Urology (EAU); 2007. 4 p.
- The European Association of Urology (EAU) guidelines methodology: a critical evaluation. Arnhem, The Netherlands: European Association of Urology (EAU); 18 p.

Print copies: Available from the European Association of Urology, PO Box 30016, NL-6803, AA ARNHEM, The Netherlands.

## **PATIENT RESOURCES**

None available

## **NGC STATUS**

This NGC summary was completed by ECRI Institute on November 14, 2008. The information was verified by the guideline developer on December 19, 2008.

## **COPYRIGHT STATEMENT**

This summary is based on the original guideline, which is subject to the guideline developer's copyright restrictions.

Downloads are restricted to one download and print per user, no commercial usage or dissemination by third parties is allowed.

## **DISCLAIMER**

### **NGC DISCLAIMER**

The National Guideline Clearinghouse™ (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at <http://www.guideline.gov/about/inclusion.aspx>.

NGC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI Institute, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

© 1998-2009 National Guideline Clearinghouse

Date Modified: 1/19/2009

